

CHAPTER 75
MANAGEMENT OF SPECIFIC FLOOD PLAIN AREAS

[Prior to 7/1/83, INRC Ch 4]

[Prior to 12/3/86, Water, Air and Waste Management[900]]

567—75.1(455B) Applicability and purposes of chapter. The department has jurisdiction over all flood plains and floodways in the state for the purpose of establishing and implementing a program to promote the protection of life and property from floods and to promote the orderly development and wise use of the flood plains of the state. As part of the program, the department regulates flood plain development as defined in these rules by three alternative methods: establishment of regulations for specific stream reaches by issuance of flood plain management orders; approval of flood plain management regulations adopted by local governments; and approval of flood plain development on a case-by-case basis where areas or projects are not covered by the first two methods. Any person who desires to construct or maintain a structure, dam, obstruction, deposit or excavation, or allow the same in any flood plain or floodway has a responsibility to contact the department to determine whether approval is required from the department or a local government authorized to act for the department.

75.1(1) Regulation of development by issuance of department flood plain management orders. The department may issue flood plain management orders to better ensure the orderly development and wise use of the flood plains of specific stream reaches. Each flood plain management order issued shall comply with the criteria in this chapter. However, a flood plain management order issued before the effective date of an amendment of the rules in this chapter shall not be invalidated by reason of nonconformity with the amendment.

75.1(2) Regulation of development by approval of locally adopted flood plain management ordinances. The department may delegate regulatory authority to a local government by approving flood plain management regulations adopted by the local government to better ensure the orderly development and wise use of the flood plains of specific stream reaches. Local flood plain management regulations shall comply with the applicable criteria in this chapter. However, a local regulation approved by the department before the effective date of an amendment of the rules in this chapter shall not be invalidated by reason of nonconformity with such amendment.

75.1(3) Regulation of development on a case-by-case basis. Flood plain development not regulated by department flood plain management orders or department-approved, locally adopted ordinances is regulated by the department on a case-by-case basis. 567—Chapter 71 of these rules contains thresholds identifying the types of development for which such approval is required. 567—Chapter 70 contains procedures for requesting approval of development. 567—Chapter 72 contains criteria for approving development.

567—75.2(455B) Flooding characteristics. Flood plain regulations for a specific stream reach established pursuant to this chapter shall be based upon an analysis of the relevant flooding characteristics of the stream for which regulations are being established. The flooding characteristics of a stream include: flood magnitudes and frequencies; flood elevations, velocities and inundation limits; rate of rise of the flood waters and the related flood warning time; and characteristics related to changes in stream equilibrium over time. The following subrules identify standard methods for determining specific flooding characteristics.

75.2(1) Flood frequencies and magnitudes.

a. Discharge frequency relationship. In determining the discharge frequency relationship for the relevant flood the following frequency analysis methods shall be considered:

1. Log-Pearson Type III distribution where available records are adequate to warrant statistical analysis of the data.
2. Regional flood frequency methods such as department Bulletin No. 11 which are applicable to the stream and watershed.
3. Rainfall-runoff watershed modeling techniques.
4. Other hydrologic techniques which are consistent with accepted scientific practices.

b. Regional flood magnitude. In determining the magnitude of the regional flood as defined in these rules the following methods should be considered:

1. An enveloping curve of experienced Iowa flood discharges as plotted in relation to the drainage area of the stream where they occurred.
2. The Standard Project Flood as computed by the U.S. Army Corps of Engineers.
3. Flood frequency methods outlined in paragraph "a" of this subrule.

75.2(2) *Flood stages and inundation limits.* Standard engineering methods and experienced flood information shall be used to determine flood heights and inundation limits. Consideration shall be given to the following:

- a.* The Manning formula or equivalent uniform-flow formula where stream geometry and slope are reasonably uniform.
- b.* Steady, gradually varied flow analysis using such surface water hydraulic models as one-dimensional, fixed-bed models.
- c.* For areas upstream and adjacent to a dam or impounding structure, a reservoir routing shall be made to determine maximum flood pool levels.
- d.* Experienced flood information including high water marks, flood profiles, and aerial or other photographs.
- e.* Other hydraulic methods which are consistent with standard engineering practices.

75.2(3) *Flood warning and response time.* Where the effectiveness of flood protection methods depends on timely human intervention to activate flood protection works or to evacuate people or property from flood-prone areas, the available flood warning time shall be determined. In estimating flood warning time and determining the reliability of a flood warning system, consideration shall be given to the following:

- a.* The general flooding history of the area including information on the flood warning provided during past floods.
- b.* Various hydrologic methods which permit calculation of basin rainfall/runoff response, travel time of a flood wave, rate of rise of flood waters and other pertinent data.
- c.* Meteorologic information such as weather forecasting methods.
- d.* Reliability of methods proposed for providing flood warning within the available time.
- e.* Response time for implementing flood protection measures once the flood warning has been given.
- f.* Seriousness of the hazard to life and property if the warning system fails, considering flood depths, velocities, and duration.

567—75.3(455B) *Area of regulation.* Regulations established by department flood plain management orders or by approved local ordinances shall fix the flood plain area to be regulated. The extent of the area to be regulated shall be based on the flooding characteristics of the stream and shall be delineated on suitable topographic or planimetric maps.

567—75.4(455B) *Establishment of a floodway.* Regulations established by department flood plain management order or by approved local ordinances shall provide for a floodway: An area of the flood plain which must be reserved for the conveyance of flood flows so that flood heights and velocities will not be substantially increased by future encroachment on the flood plain. Delineation of the encroachment limits defining the outer limits of the floodway must conform to the following criteria insofar as possible.

75.4(1) *Increase in water surface elevation.* The increase in the water surface elevation of the 100-year recurrence interval flood which would result from confining flood flows to the floodway shall not exceed one foot.

75.4(2) *Equal and opposite conveyance.* The concept of equal and opposite conveyance as defined in 567—Chapter 70 shall be used to locate encroachment limits.

75.4(3) Protection of existing development. To the extent feasible, encroachment limits shall be located as follows:

- a. To avoid the need to seek removal of a lawful existing structure in order to safely convey the 100-year flood;
- b. To minimize any increase in the level of the 100-year flood in an area where such increase would adversely affect an existing lawful structure;
- c. To avoid the need to place an existing lawful structure in a delineated floodway if the placement would result in additional restrictions on improvements or reconstruction or replacement of the structure.

75.4(4) When acquisition of property interest required. Where protection of an existing structure necessitates prohibition of development in an area which could otherwise be developed under the criteria in 75.4(1) and 75.4(2), the department or local governmental designee may require that the owners of land benefited by the application of criteria in this subrule acquire property interests as needed to provide an adequate alternative floodway.

567—75.5(455B) Minimum standards for flood plain and floodway uses. Regulations established must require that structures vulnerable to flood damage be protected at the time of initial construction. The level of flood protection shall be commensurate with the flood damage potential of the use, must prevent obstruction of the floodway unless mitigating measures are taken, and must regulate or prohibit uses which result in significant public damages and costs. The following minimum standards shall be met:

75.5(1) All flood plain structures.

- a. Construction materials and methods shall be used which minimize flood damage potential.
- b. Minimum levels of flood protection shall be consistent with or exceed the minimum levels of flood protection in 567—Chapter 72.
- c. All structures used as dwellings shall be provided with an access which will remain passable by wheeled vehicles during the 100-year flood. But this criterion shall not apply where the department or its local designee determines that this access is not required for effective protection of life and property on the basis of the criteria for determining flood warning and response time as set forth in subrule 75.2(3).

75.5(2) Floodway development and uses.

- a. No building or other structure, deposit of fill, or other potential obstruction shall be allowed in the floodway if the development individually or collectively would increase the level of the 100-year flood. An analysis of the effect a development would have on flood levels shall be based on the assumption that all similarly situated landowners would be allowed an equal degree of development.
- b. Notwithstanding paragraph “a” of this subrule, a structure, associated fill, or another potential obstruction whose location in the floodway provides a substantial public benefit may be allowed if the resulting increase in flood levels is mitigated by purchase of flooding easements or execution of other appropriate agreements with the owners of property on which flooding would be increased. Examples are bridge embankments, water supply intake structures, and water wells with appurtenant fill.
- c. Any fill, structure or other potential obstruction allowed in the floodway shall be the minimum amount or size to achieve the intended purpose.

567—75.6(455B) Preexisting nonconforming development and associated uses. Regulations established by a department flood plain management order or an approved local ordinance shall identify the conditions under which nonconforming development and associated uses which lawfully existed prior to the effective date of the regulations may continue. The conditions shall include criteria for additions, reconstruction, replacement and changes in use. The criteria should generally encourage improvements or replacement construction which would provide an adequate degree of flood protection commensurate with the damage potential. The criteria should prohibit the improvements or replacement only where extension of the useful life of the structure by improvement or replacement

would contribute to: perpetuation of an individual or collective obstruction which causes a significant increase in the level of the 100-year flood; perpetuation of a significant hazard to health or safety during floods; or perpetuation of the potential for significant flood damages to property and associated public costs.

567—75.7(335,414,455B) Delegation of authority to local governments by approval of local regulations. The department may cooperate with and assist cities and counties in the establishment of local flood plain management regulations. By approval of locally proposed regulations, the department may delegate portions of its flood plain regulatory authority to local governments.

75.7(1) *Written comment from the department required before locally adopted or amended regulation is effective.* Written approval from the department must be obtained before effective adoption or amendment of a local regulation which would control development in a flood plain or floodway for purposes related to flood protection. Local officials are encouraged to consult with the department in drafting local flood plain regulations to ensure that proposed local regulations conform to the minimum statewide standards in these rules. Each written approval shall be issued by the department. A local government may appeal the refusal of the department to approve a proposed regulation by notifying the department and requesting that the proposed local regulation be considered at the next meeting of the commission.

75.7(2) *Department approval not required for projects covered by local regulations.* Structures, fill, excavations and other projects which would otherwise require approval by the department in accordance with 567—Chapter 71 do not need such approval if they are approved by a local government in conformity with department-approved, locally adopted flood plain management regulations.

75.7(3) *Flood plain works not covered by local regulations.* Works on the flood plain which because of their nature or scope are not adequately covered by department-approved, locally adopted flood plain management regulations shall be subject to department approval under the provisions of 567—Chapters 70 to 72. Where it is unclear whether the works are adequately covered by such local regulations, the department shall make the determination. Examples are bridges, channel changes, dams and flood control levees.

75.7(4) *Failure of local government to enforce regulations.* The department may, from time to time, take action to ascertain the effectiveness of department-approved, locally adopted flood plain management regulations. Upon a finding that the local government has been negligent in administering the approved regulations, the department may revoke approval of same. Flood plain works found to be in violation of department-approved, locally adopted flood plain management regulations may be handled under the provisions of the department's rules for investigation of unauthorized projects.

567—75.8(335,414,455B) Review and approval of variances from local regulations. A variance from an approved local flood plain regulation shall not be effective until it has been reviewed and approved by the department in accordance with the following procedures.

75.8(1) *Duty of local government to notify department of each variance request.* After receipt of each request for variance from a local flood plain regulation approved by the department, the local government shall notify the department of the variance request on a form obtained from the department. The notice must be received by the department at least 15 days before any hearing which the local government schedules on the variance request.

75.8(2) *Written comment from the department.* After receipt of notice of a variance request, the department shall mail or deliver a written comment on the variance request. The comment shall be issued within 15 days after receipt of the notice or in time for consideration at any hearing held after expiration of the 15-day period. The comment shall be either a statement of objection or "no objection" as follows:

a. Objection to variance request. The department may issue an objection to the variance request. The objection may be based upon an explanation of the minimum statewide criteria which the variance request does not satisfy and the reasons why applicable criteria should not be waived. The objection may be based on a statement that the applicant for the variance has provided insufficient information

for the department to determine whether the requested variance would violate applicable minimum statewide criteria. An objection based on a statement of insufficiency of information shall identify the information needed to determine whether the request would violate applicable criteria.

b. No objection to variance requests. The comment issued by the department may state that the department has no objection to the variance request. The comment shall briefly explain why granting of the requested variance would not violate the purposes of minimum statewide criteria. A statement of “no objection” shall constitute approval to grant the requested variance.

75.8(3) Basis for variance. A variance from an applicable requirement should only be granted if the applicant can show that denial of the variance would cause unnecessary hardship and that granting of the variance would not be contrary to the public interest or the underlying purposes of the requirement in question.

75.8(4) Review or appeal of local ruling on variance request. The appropriate forum and procedures for review or appeal of the decision of a local government on a request for variance from a regulation approved by the department depend on the relationship between the local decision and the comment submitted by the department as follows.

a. When local government grants variance after objection by department. If the local government grants a variance request after issuance of an objection by the department, the local government shall give written notice of the local action and the supporting reasons to the department. The variance shall not be effective until approved by the commission. The applicant for the variance shall have the right to a contested case proceeding before the commission or its designee if required to resolve a material issue of fact or law.

b. When local government denies variance after objection by department. If the local government denies a variance request on the basis of an objection by the department, the applicant may file a notice of appeal with the department within 20 days following the local action. The applicant for the variance shall have the right to a contested case proceeding before the commission or its designee if required to resolve a material issue of fact or law.

c. When local government grants or denies a variance request after a “no objection” comment by the department. When a local government grants or denies a variance request after receiving a “no objection” comment from the department any appeal normally should be taken in the manner provided for appeal of other local actions. An appeal should be filed with the department only if the purpose of the appeal is to challenge the basis of the “no objection” comment.

d. Duty of local government to notify department of appeal. The local government shall promptly notify the department of the filing of any petition for judicial review of local action on a variance request so the department may determine whether participation in the judicial review would be in the interest of the state.

567—75.9(335,414,455B) Notice of proposed department flood plain management order or proposed local flood plain regulation. The department shall not issue a flood plain management order establishing encroachment limits or flood plain management regulations until public notice of the proposed establishment thereof has been given and a public hearing held to provide opportunity for the presentation of all protests. Public notice and a hearing shall not be required for department approval of flood plain management regulations proposed by local governments provided that such local governments give public notice and conduct public hearings as required by their enabling legislation which authorizes local adoption of the flood plain management regulations.

These rules are intended to implement Iowa Code sections 455B.262, 455B.263, 455B.264, 455B.275 to 455B.279(2).

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